

March 2010
SP075A SP076A SP077A

Power over Ethernet Surge Protectors

Guard your wireless devices from data and power line surges, spikes, and overvoltages.



Customer Support Information

Order toll-free in the U.S.: Call 877-877-BBOX (outside U.S. call 724-746-5500) FREE technical support 24 hours a day, 7 days a week: Call 724-746-5500 or fax 724-746-0746 Mailing address: Black Box Corporation, 1000 Park Drive, Lawrence, PA 15055-1018 Web site: www.blackbox.com • E-mail: info@blackbox.com

FEDERAL COMMUNICATIONS COMMISSION AND INDUSTRY CANADA RADIO FREQUENCY INTERFERENCE STATEMENTS

This equipment generates, uses, and can radiate radio-frequency energy, and if not installed and used properly, that is, in strict accordance with the manufacturer's instructions, may cause interference to radio communication. It has been tested and found to comply with the limits for a Class A computing device in accordance with the specifications in Subpart B of Part 15 of FCC rules, which are designed to provide reasonable protection against such interference when the equipment is operated in a commercial environment. Operation of this equipment in a residential area is likely to cause interference, in which case the user at his own expense will be required to take whatever measures may be necessary to correct the i nterference.

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

This digital apparatus does not exceed the Class A limits for radio noise emission from digital apparatus set out in the Radio Interference Regulation of Industry Canada.

Le présent appareil numérique n'émet pas de bruits radioélectriques dépassant les limites applicables aux appareils numériques de classe A prescrites dans le Règlement sur le brouillage radioélectrique publié par Industrie Canada.

Normas Oficiales Mexicanas (NOM)Electrical Safety Statement

INSTRUCCIONES DE SEGURIDAD

1. Todas las instrucciones de seguridad y operación deberán ser leídas antes de que el aparato eléctrico sea operado.

2. Las instrucciones de seguridad y operación deberán ser guardadas para referencia futura.

3. Todas las advertencias en el aparato eléctrico y en sus instrucciones de operación deben ser respetadas.

4. Todas las instrucciones de operación y uso deben ser seguidas.

5. El aparato eléctrico no deberá ser usado cerca del agua—por ejemplo, cerca de la tina de baño, lavabo, sótano mojado o cerca de una alberca, etc.

6. El aparato eléctrico debe ser usado únicamente con carritos o pedestales que sean recomendados por el fabricante.

7. El aparato eléctrico debe ser montado a la pared o al techo sólo como sea recomendado por el fabricante.

8. Servicio—El usuario no debe intentar dar servicio al equipo eléctrico más allá a lo descrito en las instrucciones de operación. Todo otro servicio deberá ser referido a personal de servicio calificado.

9. El aparato eléctrico debe ser situado de tal manera que su posición no interfiera su uso. La colocación del aparato eléctrico sobre una cama, sofá, alfombra o superficie similar puede bloquea la ventilación, no se debe colocar en libreros o gabinetes que impidan el flujo de aire por los orificios de ventilación.

10. El equipo eléctrico deber ser situado fuera del alcance de fuentes de calor como radiadores, registros de calor, estufas u otros aparatos (incluyendo amplificadores) que producen calor.

11. El aparato eléctrico deberá ser connectado a una fuente de poder sólo del tipo descrito en el instructivo de operación, o como se indique en el aparato.

12. Precaución debe ser tomada de tal manera que la tierra fisica y la polarización del equipo no sea eliminada.

13. Los cables de la fuente de poder deben ser guiados de tal manera que no sean pisados ni pellizcados por objetos colocados sobre o contra ellos, poniendo particular atención a los contactos y receptáculos donde salen del aparato.

14. El equipo eléctrico debe ser limpiado únicamente de acuerdo a las recomendaciones del fabricante.
15. En caso de existir, una antena externa deberá ser localizada lejos de las lineas de energia.

16. El cable de corriente deberá ser desconectado del cuando el equipo no sea usado por un largo periodo de tiempo.

17. Cuidado debe ser tomado de tal manera que objectos liquidos no sean derramados sobre la cubierta u orificios de ventilación.
18. Servicio por personal calificado deberá ser provisto cuando:

A: El cable de poder o el contacto ha sido dañado; u

B: Objectos han caído o líquido ha sido derramado dentro del aparato; o

C: El aparato ha sido expuesto a la lluvia; o

D: El aparato parece no operar normalmente o muestra un cambio en su desempeño; o

E: El aparato ha sido tirado o su cubierta ha sido dañada.

Trademarks Used in This Manual

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1. Specifications

Peak Pulse Current (10/100 Waveform):
Pins 1, 2, 3, 6: 132 amps;
Pins 4, 5, 7, 8: SP075A: 50 amps; SP077A: 103 amps;
Pins 1–8: SP076A: 50 amps

Protection: Pins 1, 2, 3, 6: Differential and common mode;
Pins 4, 5, 7, 8: SP075A: Differential and common mode/line to ground;
Pins 1–8: SP076A: Differential and common mode/line to ground;
SP077A: Common mode/line to ground

Response Time: Less than 5 nanoseconds

Standard Clamp Voltage: Pins 1, 2, 3, 6: 7.5 V;
Pins 4, 5, 7, 8: SP075A: 60 V; SP077A: 30 V;
Pins 1–8: SP076A: 60 V

Maximum Capacitance: SP075A, SP077A: Less than 25 pF on data lines;
SP076A: Less than 75 pF on all lines

Indicators: None

MTBF: 1,945,146 hours

Temperature Tolerance: Storage: 32 to 140° F (0 to 60° C)

Relative Humidity: Up to 95%, noncondensing

Maximum Altitude: Up to 10,000 ft. (3048 m)

Size: 0.9"H x 1.4"W x 3.6"L (2.3 x 3.6 x 9.1 cm)

Weight (Shipping): 0.2 lb. (0.1 kg)

2. Overview

The Power over Ethernet (PoE) Surge Protectors guard your wireless devices from data and power surges, spikes, and overvoltages.

Three models are available: two with 60-volt clamping voltage (SP075A and SP076A) and one with 30-volt clamping voltage (SP077A).

Since it uses a solid-state design and sophisticated multistage hybrid circuits, the surge protector gives you maximum protection without performance loss.

The PoE Surge Protector is compatible with both 10BASE-T and 100BASE-T Power over Ethernet devices including wireless access points, access servers, and routers that support Power over Ethernet (PoE).

WARNING: No surge protector can provide complete protection if your equipment or building receives a direct lightning strike.

3. Installation

WARNING: Never install the surge protector during a lightning storm.
This surge protector is for indoor use only.

1. Unplug the unprotected equipment's power.
2. Disconnect the equipment's incoming data line.
3. Install the PoE Surge Protector between the incoming data line and the equipment's port using the supplied 6" (15.2-cm) modular patch cable. Place the surge protector as close as possible to the device being protected.
4. Connect the ground wire directly to the protected device's chassis ground connection. If you are unsure where to locate the equipment's chassis ground connection, consult the equipment's users' manual or contact the manufacturer.

CAUTION: You must connect the PoE Surge Protector's ground wire to a metal chassis in order for it to operate properly.

4. Troubleshooting

4.1 Contacting Black Box

If you determine that your Power over Ethernet Surge Protector is malfunctioning, do not attempt to alter or repair the unit. It contains no user-serviceable parts. Contact Black Box at 724-746-5500 or info@blackbox.com.

Before you do, make a record of the history of the problem. We will be able to provide more efficient and accurate assistance if you have a complete description, including:

- the nature and duration of the problem.
- when the problem occurs.
- the components involved in the problem.
- any particular application that, when used, appears to create the problem or make it worse.

4.2 Shipping and Packaging

If you need to transport or ship your Power over Ethernet Surge Protector:

- Package it carefully. We recommend that you use the original container.
- If you are shipping the surge protector for repair, make sure you include everything that came in the original package. Before you ship, contact Black Box to get a Return Authorization (RA) number.

About Black Box

Black Box Network Services is your source for more than 118,000 networking and infrastructure products. You'll find everything from cabinets and racks and power and surge protection products to media converters and Ethernet switches all supported by free, live 24/7 Tech support available in 20 seconds or less.